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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/087,282

03/01/2002

Ning Lei

D5219

3096

30409

7590

03/03/2004

INTERNATIONAL ENGINE INTELLECTUAL PROPERTY COMPANY  
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EXAMINER

WOLFE JR, WILLIS RAY

ART UNIT

PAPER NUMBER

3747

DATE MAILED: 03/03/2004

*6*

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/087,282

Applicant(s)

LEI ET AL.

Examiner

Willis R. Wolfe, Jr.

Art Unit

3747

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-11,13-25 and 27-32 is/are rejected.
- 7) ☒ Claim(s) 3,12 and 26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5, 6, 13, 16-18, 28, 30 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Mason et al. Note valve actuator (50) independent of the fixed timing mechanism (26) operated by fluid pressure.

Claims 1, 2, 5, 6, 8, 10, 11, 13, 16-18, 20, 23, 24 and 27-31 are rejected under 35 U.S.C. 102(b) as being anticipated by Quenneville. Note Figures 3A-3F showing a hydraulic valve actuator with a valve means (84) for actuating an exhaust valve independently of a fixed timing mechanism (56) for a turbocharged engine.

Claims 1, 4-6, 13, 16, 17, 28, 30 and 31 are rejected under 35 U.S.C. 102(e) as being anticipated by Feucht. Note valve actuator (60) digitally controlled independent of the fixed timing mechanism (84).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 9 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quenneville. Quenneville discloses the claimed invention except for utilizing a variable nozzle turbocharger. It would have been an obvious matter of design choice to modify the turbocharger of Quenneville by providing a variable nozzle turbocharger since

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applicant has not disclosed that the particular type of turbocharger solves any stated problem or is for any particular purpose and it appears that the invention of Quenneville would perform equally well with a variable nozzle turbocharger.

Claims 7, 14, 15, 19 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mason et al in view of Vattaneo et al. Mason et al discloses the claimed invention except for the utilization of variably timing the intake valve to provide for internal EGR. Vattaneo et al teaches that it is known to provide variable intake valve timing to provide for internal EGR. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the valve control system of Mason et al by providing variable intake valve timing for internal EGR as taught by Vattaneo et al.

Claims 7, 14, 15, 19, 21, 22 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quenneville in view of Vattaneo et al. Quenneville discloses the claimed invention except for the utilization of variably timing the intake valve to provide for internal EGR. Vattaneo et al teaches that it is known to provide variable intake valve timing to provide for internal EGR. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the valve control system of Quenneville by providing variable intake valve timing for internal EGR as taught by Vattaneo et al.

***Allowabl Subject Matter***

Claims 3, 12 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references of Fucho and Houtz are cited to show independently operated valve actuators for opening exhaust valves.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willis R. Wolfe, Jr. whose telephone number is (703) 308-1950. The examiner can normally be reached on Tuesday, Wednesday and Friday (4:30 AM-3:0 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry C. Yuen can be reached on (703) 308-1946. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Willis R. Wolfe, Jr.  
Primary Examiner  
Art Unit 3747

WRW  
February 20, 2004